

## 50Ω DWDM Medium Power L-Band HTS

- L-Band HTS (700-2450 MHz)
- 1 to 96 channels per fiber
- Ideal for Ka-Band rain fade diversity
- 5 mW Laser
- Standard 5-year warranty



**ViaLiteHD** DWDM L-Band HTS RF over fiber links use dense wavelength division multiplexer (DWDM) lasers and have been designed for the satellite industry to transport RF signals over long distances, enabling Ka-Band diversity or remote location of antennas up to several hundred kilometers away. Due to the very wide dynamic range, the same link can be used in both the transmit or receive paths. This dynamic range allows High Throughput Satellite (HTS) transponder bandwidths of 500 MHz, 800 MHz or even 1500 MHz to be transported, even over long distances. A full suite of DWDM accessories is available as well as system design, commissioning expertise and system setup.

The chassis cards are available with the **ViaLiteHD** blind mate option, which allows all cables to be connected at the rear of the chassis when installed. It also allows configuration changes to be completed without disturbing the connections and very fast changeover of cards; enabling five 9s reliability.

Options include:

- 50 Ω electrical connectors: SMA and MCX
- Optical connectors: SC/APC, LC/APC, FC/APC and E2000/APC
- Test ports on Tx and Rx modules
- Built-in BiasT for LNB powering through RF connection
- LNB control circuit with 13/18 VDC & 22 kHz tone
- Blind mate connectivity (SC/APC and SMA)

### Applications

- Ka-Band diversity rain-fade application
- Fixed satcom earth stations and teleports
- Gateway reduction within a satellite footprint
- Government installations
- Remote monitoring stations
- Leased fiber reduction

### Formats

3U Chassis  
1U Chassis  
Yellow OEM  
Outdoor enclosures

## Technical specification

	Units	Note	50 Ohm DWDM L-Band HTS
Transmitter			HRT-L1-8R-30-RC33 (example)
Receiver			HRR-L1-8R-03 (example)
Frequency range	MHz		700-2450
Impedance, RF connector			50 Ω SMA, blind mate
VSWR	(typ)		1:1.5
Link gain (Tx gain / Rx gain), default	dB (nom)	a	15 (-5 / +20)
Tx gain adjustment range	dB (typ)		15.5
Tx gain adjustment from default gain	dB (typ)	d	+/-3
Rx gain adjustment range	dB (typ)		15.5
Rx gain adjustment from default gain	dB (typ)	d	+/-3
Gain adjustment step size Rx and Tx	dB (typ)		0.5
Flatness, fullband, L-Band	dB (max)	a h	±1.5
Flatness, fullband, L-Band	dB (typ)	a h	±0.5
Flatness, 36MHz, L-Band	dB (typ)	a	±0.2
Gain stability over temperature range	dB (max)	a	±1
Gain stability	dB (typ)		0.25 @ 24 hrs
Nominal input signal / output signal	dBm		-20 / -20
IMD @ nominal output power	dB (typ)	c	-69
CNR @ nominal input power, 36MHz	dB (typ)	b	60
P1dB <sub>input</sub>	dBm (typ)	a k	-1.5
P1dB <sub>input</sub> , at maximum Tx gain	dBm (typ)	a k	-6.5
IP3 <sub>input</sub> , at default gain	dBm (typ)	a k	+11.5
Noise figure, at default gain	dB (typ)	a k	14
Noise figure, at maximum Tx gain	dB (typ)	a k	9
Noise figure, 5dB optical loss	dB (typ)	c k	19.5
SFDR	dB/Hz <sup>2/3</sup> (typ)	a	114
Test port gain, transmitter	dB (typ)	l	-20
Test port gain, receiver	dB (typ)	l	-20
Test port flatness	dB (typ)	l	±1
Maximum input power without damage	dBm		15
LNB power			Internal 13/18/22 V @ 700 mA with switchable tone
Power Consumption Tx	W (typ)		3.5, excluding LNA power
Power Consumption Rx	W (typ)		1.3
Optical connector			SC/APC, blindmate
Optical wavelength	nm		1550
Laser type			DFB (Distributed feedback), thermo-electric cooled laser
Optical power output	dBm (typ)		7
Summary alarm output			Open drain alarm: OPEN: Alarm, CURRENT SINK: okay
Operating temperature range		e	-20 °C to +60 °C
Storage temperature range			-40 °C to +70 °C
Humidity	RH		95% non-condensing humidity

- a Nominal input power @ 0 dB optical loss
- b Nominal input power @ 1 dB optical loss
- c Nominal output power @ 5 dB optical loss
- e Datasheet parameters based on temperature range -10 °C to +50 °C, refer to user manual for performance parameters @ -20 °C and +60 °C
- h Default gain setting
- k Measured @ 1.2 GHz
- l Relative to rear port @ 1.2 GHz
- d Guaranteed minimum adjustment from default gain

